III. HEALTH ASSESSMENT PROGRAMS

A. IMMUNIZATION COVERAGE

Background

Vaccines are among the most effective and reliable methods to prevent and control disease. Every year, they prevent countless serious illnesses and thousands of possible deaths. About 100 million vaccine doses are given annually in the United States, most of them to infants and children as part of their routine immunization schedule. A single dose of some vaccines gives nearly complete protection. With others, a series of doses spread over months or years is needed for the best results.

Children in particular are beneficiaries of the protection from infectious illnesses that vaccines offer. Currently, there are ten diseases from which children are routinely protected through the use of standard childhood immunizations: diphtheria, tetanus, pertussis (whooping cough), polio, measles, mumps, rubella (German measles), hepatitis B, *Haemophilus influenzae B* (bacterial meningitis), and varicella (chickenpox). Drastic reductions in the occurrence of these serious diseases have taken place since the introduction of vaccines. For example, there were 894,134 cases of measles reported in the United States in 1941, but only 86 cases in 2000. Louisiana had no reported cases of measles in either 2001 or 2002.

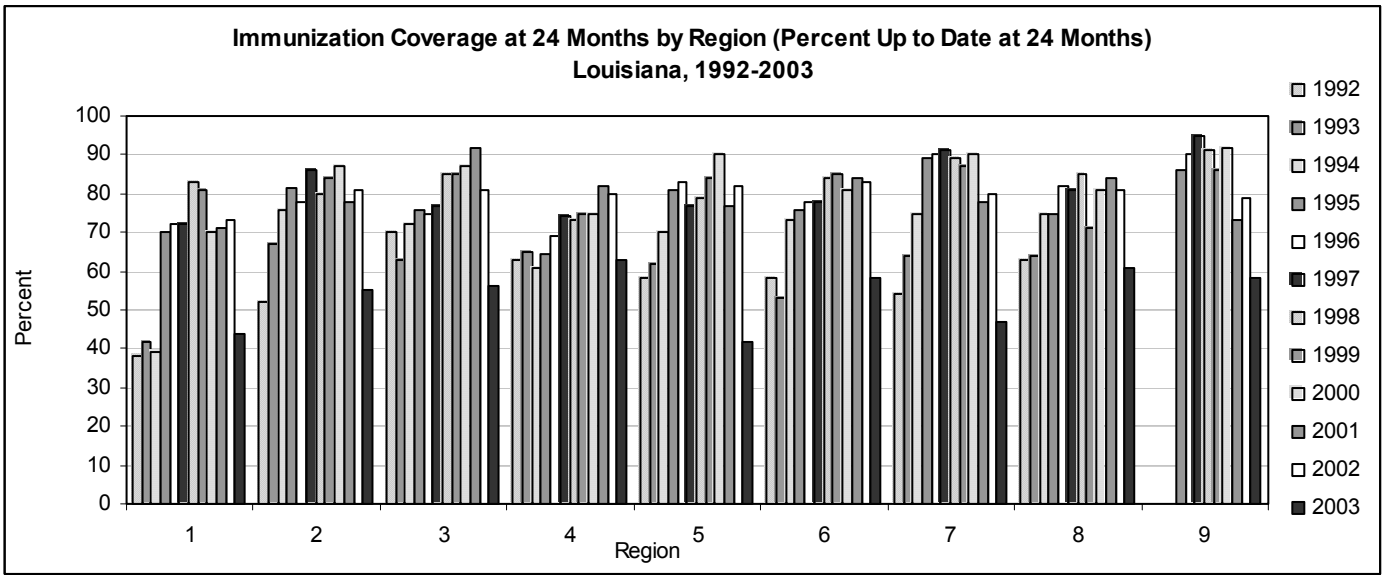
Although the public is most familiar with the vaccines used for childhood immunization, there are many others that afford protection to individuals at risk of infection from other types of exposures. Examples are the hepatitis A vaccine, which is available to select populations such as travelers to areas where the disease is endemic, and the meningococcal vaccine, which is available to select populations, such as college students living in dormitories.

In addition to being reliable and effective, vaccines are also some of the most cost-effective medical procedures available. The ten vaccine-preventable diseases addressed in standard childhood immunizations are very serious illnesses and very expensive to treat. Vaccines are relatively inexpensive and very effective. Cost estimates show that each dollar spent on immunization saves $10-$12 in direct medical and hospitalization costs. These estimates do not include attendant costs, such as workdays lost by family members, costs for outbreak control, or the burden of lives lost to these severe diseases. A prime example is measles, which leads to the hospitalization of approximately 10 percent of those who become ill. Even with excellent medical care, approximately one out of every 1,000 cases dies, usually from measles infection of the lungs and of the brain.

However, diseases that are prevented by routine childhood immunizations have not disappeared. Pertussis is spread by direct contact such as coughing on to others who are not immune. In countries where childhood immunizations against this disease have been stopped, large outbreaks of whooping

cough have occurred. The number of pertussis cases reported in Louisiana for the year 2001 decreased to 12 cases, as compared to 21 cases in 2000. Diphtheria, another dangerous infectious disease which has been controlled through childhood immunization, has not been observed in Louisiana since 1972. However, in recent years, epidemics of diphtheria have occurred in Eastern Europe and Asia. Without immunization, diphtheria and other vaccine-preventable diseases may be re-introduced to Louisiana and contribute to an increasing number of cases.

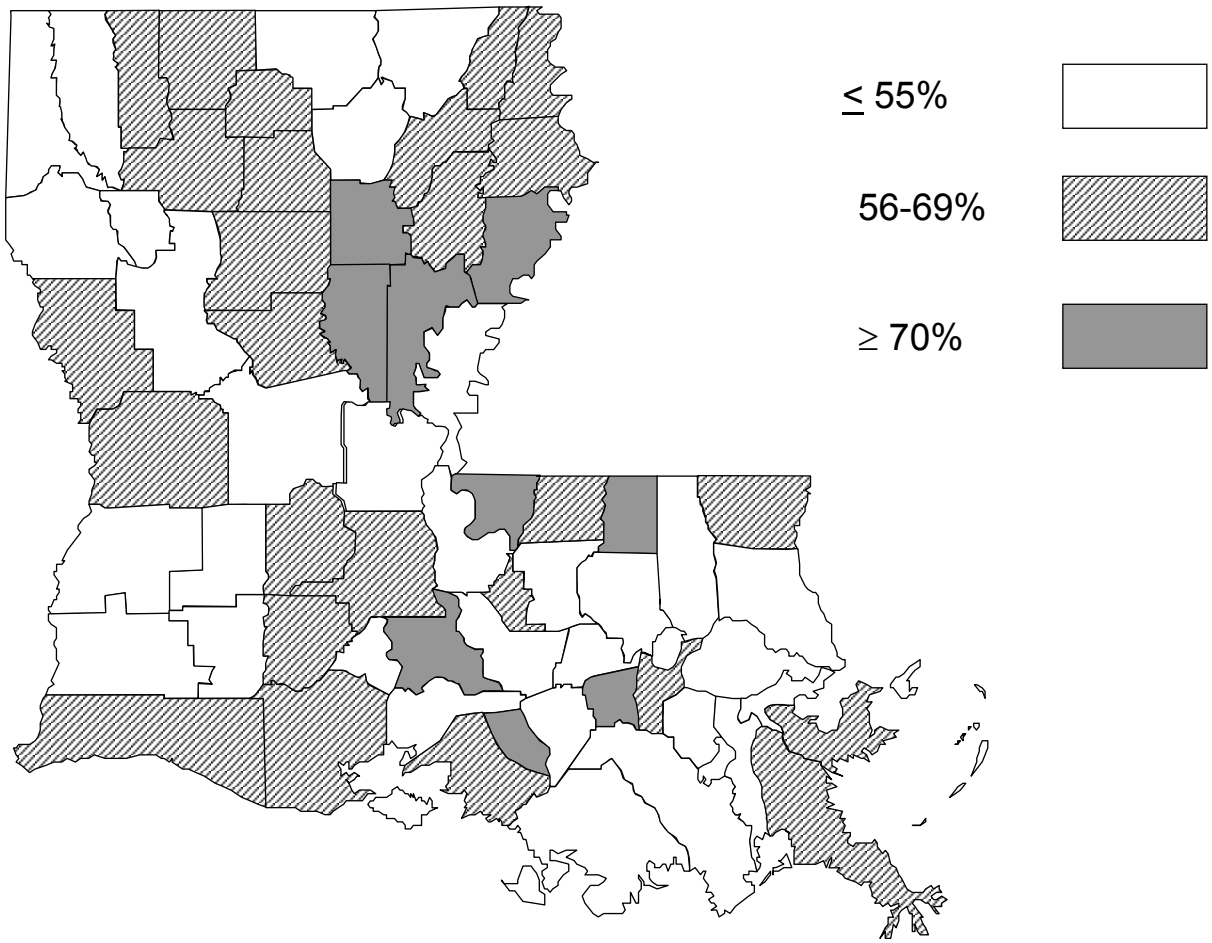
The IMMUNIZATION PROGRAM of the OFFICE OF PUBLIC HEALTH (OPH) conducts periodic assessments to determine the immunization coverage rates throughout the state. As the graph below indicates, rates of coverage have generally been increasing steadily between 1992 and 2002, though there have been variations between the nine OPH administrative regions over the years and a significant decrease reflected statewide in 2003.



Source: Louisiana Department of Health and Hospitals, Office of Public Health, Immunization Program
Note: No data are provided for Region 9 (Slidell-Hammond) for the years 1992 to 1994 because it was not instituted as a DHH-OPH region until 1995.

The map and table on the following pages display the percent of immunization coverage at age 24 months among those served by parish health units. Calcasieu Parish had the lowest immunization coverage rate at 23 percent, while Morehouse Parish had the highest rate at 82 percent.

Percent of Immunization Coverage at 24 Months of Age among Children Served in Public Clinics, Louisiana, 2003



Source: Louisiana Department of Health and Hospitals, Office of Public Health, Immunization Program

Immunizations: Percent Up-To-Date at Age 24 Months* Louisiana 2003	
Clinic	**%UTD 2003 Results**
Region I	
Orleans-Edna Pilsbury	42.0
Orleans-Mandeville Detiege	46.0
Orleans-Mary Buck	52.0
Orleans-Katherine Benson	45.0
Orleans-Helen Levy	34.0
Orleans-St. Bernard Gentilly	22.0
Orleans-Ida Hymel	35.0
St. Bernard	58.0
Jefferson-Marrero	43.0
Plaquemines	63.0
Jefferson-Metairie	46.0
Region II	
Ascension	50.0
West Baton Rouge	66.0
West Feliciana	75.0
Iberville	54.0
East Feliciana-Clinton	57.0
Pointe Coupee	50.0
E. Baton Rouge	30.0
Region III	
St. James	70.0
Lafourche-Galliano	58.0
Lafourche-Thibodaux	48.0
Terrebonne	46.0
St. Mary	62.0
St. John	56.0
Assumption	54.0
St. Charles	N/A
Region IV	
Evangeline	58.0
St. Landry	64.0
St. Martin	70.0
Acadia	58.0
Region IV (continued)	
Vermilion	60.0
Lafayette	39.0
Iberia	55.0
Region V	
Allen	55.0
Calcasieu-Sulphur	20.0
Calcasieu-Lake Charles	25.0
Jefferson Davis	51.0
Beauregard	40.0
Cameron	60.0
Region VI	
Catahoula	81.0
LaSalle	70.0
Rapides	43.0
Grant	69.0
Winn	58.0
Vernon	61.0
Concordia	51.0
Avoyelles	32.0

Immunizations: Percent Up-To-Date at Age 24 Months* Louisiana 2003	
Clinic	**%UTD 2003 Results**
Region VII	
Red River	47.0
Claiborne	58.0
Webster-Springhill	62.0
DeSoto	50.0
Natchitoches	48.0
Bienville	65.0
Sabine	65.0
Webster-Minden	58.0
Bossier-Bossier City	39.0
Caddo	42.0
Region VIII	
Morehouse-Bastrop	53.0
Franklin-Winnsboro	65.0
West Carroll-Oak Grove	60.0
Ouachita-Monroe	51.0
Caldwell	82.0
Tensas-St. Joseph	74.0
Lincoln	59.0
Jackson-Jonesboro	56.0
East Carroll	68.0
Union	46.0
Richland-Rayville	67.0
Ouachita-West Monroe	45.0
Madison	64.0
Region IX	
St. Helena	79.0
Washington-Franklinton	54.0
Washington-Bogalusa	62.0
Tangipahoa	55.0
St. Tammany	48.0
Livingston	51.0

*Up-to-date includes 4 DTAP, 3 OPV or IPV, and 1 MMR

N/A: Not Applicable - no longer an OPH Parish Health Unit

Source: Louisiana Department of Health and Hospitals Office of Public Health, Immunization Program

B. Infectious Disease Surveillance

Disease Surveillance

Surveillance of infectious diseases, chronic diseases, and injuries is essential to understanding the health status of the population and planning effective prevention programs. The history of reporting and tracking of diseases that pose a risk to public health in the United States dates back to more than a century ago. Fifty years ago, morbidity statistics published each week were accompanied by a statement: "No health department, state or local, can effectively prevent or control diseases without the knowledge of when,

where, and under what condition cases are occurring." Today, disease surveillance remains the primary tool for the gathering of information essential to controlling disease spread in the population.

Achievement of the CENTERS FOR DISEASE CONTROL AND PREVENTION, Healthy People 2010 Objectives depends in part on the ability to monitor and compare progress toward the objectives at the federal, state, and local levels. Infectious disease surveillance activities are a primary function of the programs within the DEPARTMENT OF HEALTH AND HOSPITALS (DHH), OFFICE OF PUBLIC HEALTH (OPH). Many OPH programs exist to conduct disease surveillance for the State of Louisiana. A sampling of these programs includes the INFECTIOUS DISEASE EPIDEMIOLOGY PROGRAM, the SEXUALLY TRANSMITTED DISEASES CONTROL PROGRAM, the TUBERCULOSIS CONTROL PROGRAM, the HIV/AIDS PROGRAM, and the IMMUNIZATIONS PROGRAM.

Disease surveillance involves the collection of pertinent data, the tabulation and evaluation of the data, and the dissemination of the information to all who need to know. This process is a very important aspect of public health because its purpose is the reduction of morbidity (i.e., disease occurrence). The immediate use of surveillance is for disease control; the long-term use is to assess trends and patterns in morbidity.

Surveillance also facilitates epidemiologic and laboratory research, both by providing cases for more detailed investigation or case-control studies, and by directing which research avenues are most important. Reports of unusual clusters of diseases are often followed by an epidemiological investigation to identify and remove any common source exposure or to reduce other associated risks of transmission.

Notifiable Diseases

Reporting of notifiable diseases to public health agencies is the backbone of disease surveillance in Louisiana and nationwide. The Sanitary Code, State of Louisiana, Chapter II, entitled "The Control of Diseases," charges the BOARD OF HEALTH (i.e., DHH/OPH) to promulgate a list of diseases that are required to be reported, who is responsible for reporting those diseases, what information is required for each case of disease reported, what manner of reporting is needed, and to whom the information is reported. Reporting of cases of communicable diseases is important in the planning and evaluation of disease prevention and control programs, in the assurance of appropriate medical therapy, and in the detection of common-source outbreaks. Surveillance data gathered through the reporting of notifiable diseases are used to document disease transmission, quantify morbidity, estimate trends, and identify risk factors for disease acquisition.

DHH routinely follows up selected disease cases, either directly or through the individual's physician or other health care provider. Tracking and follow-up are done to ensure initiation of appropriate

prophylactic therapy for contacts of persons with the infectious condition and appropriate preventive measures for the community. All disease tracking/follow-up reports are confidential and constitute an essential element in monitoring and maintaining the health of the public in Louisiana. Through participation in disease-reporting, physicians and other health care providers are integral parts in ensuring that public health resources are used most effectively. Reporting for a number of infectious diseases is mandatory as listed in the Sanitary Code.

Bioterrorism Surveillance

The INFECTIOUS DISEASE EPIDEMIOLOGY PROGRAM has developed several systems to identify disease syndromes associated with bioterrorism agents prior to their confirmation, which may take several days.

Early detection of a bioterrorism event is considered essential. Most diseases caused by a bioterrorism agent are rapidly fatal, but may be treatable in the early stages or even preventable with timely administration of antibiotics or vaccination. If the disease is transmissible from person to person, early intervention is the best measure to prevent the spread of disease. People affected by a bioterrorism agent may present themselves at emergency rooms, be transported by emergency medical service (EMS), consult at a dermatologist, or be examined by a coroner. An animal may even be the first to be affected since many of the bioterrorism agents are, in fact, primarily affecting animals.

The bioterrorism-surveillance systems in place are (1) emergency room syndromic surveillance, a web-based reporting system for emergency departments, (2) emergency medical services syndromic surveillance, a web-based reporting system for emergency medical services, (3) a veterinary disease reporting system, another web-based system, (4) a call-in notification system with dermatologists, and (5) a call-in notification with the coroners.

Infectious Disease Outbreak Investigations

Infectious diseases are transmitted by a variety of methods: human to human via oral/fecal route (ingestion of the organism), exposure to blood, airborne and droplet routes and direct person-to-person contact, vectors such as mosquitoes and ticks, and animal to human (zoonotic). In Louisiana, outbreaks of a wide variety of infectious diseases have occurred including Norovirus, gastroenteritis, hepatitis A, salmonellosis, shigellosis, perfringens food poisoning, pertussis, West Nile encephalitis, and others. The most compelling reason to investigate a recognized or suspected outbreak of disease is that exposure to the source(s) of infection may be continuing; by identifying and eliminating the source of infection, OPH can prevent additional cases. Another reason for investigating outbreaks is that the results of the investigation may lead to recommendations or strategies for preventing similar outbreaks in the future. Other reasons for investigating outbreaks are the opportunity to describe new diseases and learn more

about known diseases; evaluate existing prevention strategies, e.g., vaccines; teach and improve research on epidemiology; and address public health concern about the outbreak.

The effectiveness of the investigation is in large part determined by how quickly and thoroughly investigative activities are initiated. Historically, all infectious disease outbreak investigations were initiated and managed through the OPH'S INFECTIOUS DISEASE EPIDEMIOLOGY PROGRAM. This program, however, is now relying on a statewide regional network of epidemiologists (Regional Disease Surveillance Specialists and Regional Epidemiologists) assisted, if need be, by additional staff such as a nurse, sanitarian, and/or disease intervention specialist, among others. Each OPH administrative region thus has an Infectious Disease Rapid Response Team (ID-RRT), which the Infectious Disease Epidemiology Program provides training for. The training comprises basic epidemiologic principles, outbreak investigation methodology, computer analysis and interpretation of data, presentation of results, and selection of the appropriate disease control methods. Each team member brings a unique set of skills/knowledge that is very important in conducting outbreak investigations. Activities are coordinated and supervised by the INFECTIOUS DISEASE EPIDEMIOLOGY PROGRAM, and guidance and assistance are provided as needed. The ID-RRT members conduct most of the field activities, and both the INFECTIOUS DISEASE EPIDEMIOLOGY PROGRAM and the regional teams analyze the data. Recommendations are provided and guidance given for instituting appropriate disease control measures.

Outbreak investigations, an important and challenging component of epidemiology and public health, can help identify the source of ongoing outbreaks and prevent additional cases. Even when an outbreak is over, a thorough epidemiologic and environmental investigation often can increase the public health community's knowledge of a given disease and prevent future outbreaks. Outbreak investigations also provide epidemiologic training and foster cooperation between the clinical and public health communities. Most outbreaks are handled in a timely manner with effective outcomes. Additionally, since these staff members are located in the communities, they are in a better position to identify potential outbreak situations than are staff members housed in the central office. The concept of using public health staff from different disciplines and cross training them for a common, collaborative purpose sets a precedent for similar efforts dealing with other public health issues, and reflects the agency's goal of developing a streamlined, cost effective, integrated workforce. One unexpected benefit has been the increased local visibility creating positive impressions with the public and the media.

Diseases reported in the OPH surveillance program include: arthropod-borne encephalitis (including West Nile neuro-invasive disease), aseptic meningitis, campylobacteriosis, *E. coli 0157:H7* and hemolytic-uremic syndrome, giardiasis, *Haemophilus influenzae* (invasive disease), hepatitis A, B, and C; legionellosis, Lyme disease, malaria, *Neisseria* meningitidis (invasive disease), pertussis, rabies (animal and human), salmonellosis, shigellosis, *Streptococcus Pneumoniae* (invasive infection in children less than 5

years of age), varicella (chickenpox); and *Vibrio* infections. There are many more reportable diseases in Louisiana but their numbers are extremely small.

Surveillance also focuses on three antibiotic-resistant microorganisms: vancomycin resistant enterococcus (VRE), methicillin-resistant *Staphyloccus aureus* (MRSA), and drug-resistant *Streptococcus pneumoniae* (DRSP).

The following are two examples describing surveillance and epidemiologic response to these diseases:

Surveillance for West Nile and other encephalitides

All health care providers are required to immediately report suspected cases of arboviral encephalitis to OPH. When a suspect case is reported, an epidemiologist evaluates the case and attempts to obtain confirmation. Once confirmed, information about the distribution of new cases is compiled without any identifiers. This information is then widely disseminated to parishes, regional public health staff, hospitals and private practitioners, local health government, and mosquito control programs. This information is the most useful guide for preventive measures against arboviral encephalitis.

Surveillance for Meningococcal meningitis and invasive disease

Once a suspect case of meningococcal meningitis is reported, an epidemiologist calls the physician, laboratory specialist or hospital infection control practitioner to obtain confirmatory evidence and to establish a rapid control effort in order to prevent the spread of the illness. All close contacts are identified, interviewed by telephone or in person, and given prophylaxis. These preventive activities are carried in close collaboration with the medical providers of the case. All cases are fingerprinted with pulse field electrophoresis techniques (PFGE) to identify strains that may be potentially more virulent and alert the medical community and the public about their presence.

Selected 2002 Results of Infectious Disease Surveillance in Louisiana

- A large epidemic of West Nile neuro-invasive diseases totaling 204 cases occurred in Louisiana in 2002. It is estimated that about 40,000 Louisiana residents had been infected. There were sporadic cases throughout the state and intense foci in the areas around Lake Pontchartrain, Alexandria and Lake Charles.
- For the past 5 years, reported cases of salmonellosis ranged from 700 to 800 per year. The incidence rate is 20 cases per 100,000, reaching up to 60 cases per 100,000 in infants up to one year of age.
- The number of shigellosis cases doubled in 2002, following a pattern of cyclical changes. Children under the age of 10 years accounted for 45 percent of the cases.
- The number of *Vibrio* cases reported in 2002 increased to 48 as compared to 32 in 2000 and 34 in 2001. The main *Vibrio* species reporting around 10 cases each are *Vibrio parahemolyticus*, *Vibrio*

vulnificus and *Vibrio cholerae* non-O1, all other *Vibrio* species combined provided about 10 cases. The increase in 2002 was due to better reporting of *V. cholerae* non-O1. Of the reported *Vibrio* cases with known exposures, contact with saltwater or raw seafood drippings and seafood consumption are the reported exposures.

- The state hepatitis A rate of 2.0 per 100,000 is only about half that of the national rate. A survey estimated that 25% of young adults have been infected with this virus.
- The number of acute cases of hepatitis C reported in 2002 was 100. It is estimated that 80,000 people in Louisiana are infected with the virus.

Reports

The bimonthly *Louisiana Morbidity Report* and the *Epidemiology Annual Report* are published by the OPH, INFECTIOUS DISEASE EPIDEMIOLOGY PROGRAM. Both publications present information and statistics describing the status of reportable diseases in the state.

C. SEXUALLY TRANSMITTED DISEASE (STD) AND HIV/AIDS SURVEILLANCE

Contracting a sexually transmitted disease (STD) can have serious consequences. For example, advanced (tertiary) syphilis can produce neurological, cardiovascular, and other terminal disorders, pelvic inflammatory disease, infertility, ectopic pregnancy, blindness, cancer, fetal and infant death, birth defects, and mental retardation in children born to infected mothers.

The DHH-OPH'S STD CONTROL PROGRAM and HIV/AIDS PROGRAM work to: 1) conduct surveillance to determine the incidence and prevalence of STDs and HIV/AIDS; 2) monitor STD and HIV/AIDS trends; 3) collect data on the location and referral of persons with or suspected of having an STD, in order to facilitate medical examination and provide early treatment; and 4) conduct partner notification to limit the spread of disease.

2002 National Rankings

- Nationally, Louisiana has a high ranking among the 50 states with regard to rates of STDs and HIV/AIDS.
- Primary and secondary syphilis rates in Louisiana ranked third highest in the nation in 1998 and 1999, and eighth highest in 2000, 2001, and 2002.
- Gonorrhea rates ranked fourth highest in the nation in 1998, third highest in 1999, second highest in 2000, and highest in 2001 and 2002.
- Louisiana ranked fifth highest in AIDS case rates among the states and twelfth highest in the number of AIDS cases reported in 2002.

2002 and 2003 Disease Statistics

Please refer to the STDs and HIV/AIDS sections in "II: Morbidity."

Reports

The STD CONTROL PROGRAM and the HIV/AIDS PROGRAM maintain program databases, and generate specific analyses and reports by cause, location, and demographic factors for individuals, communities, and agencies. The HIV/AIDS PROGRAM also publishes the *HIV/AIDS Annual Report*, monthly reports and nine annual regional reports all of which are available to the public.

D. TUBERCULOSIS (TB) SURVEILLANCE

The DHH-OPH TUBERCULOSIS (TB) CONTROL PROGRAM conducts active surveillance for TB in the state. Regional staffs interact with area physicians, hospitals, and laboratories in the course of their duties. All known or suspected cases of TB are investigated to assure that transmission of the disease is contained. Currently, the TB Control Program in Louisiana is working with CDC to enhance surveillance activities. An improved methodology is being implemented to facilitate reporting and tracking.

2002 and 2003 Disease Statistics

Please refer to the Tuberculosis section in "II: Morbidity."

E. ALCOHOL & DRUG ABUSE PROGRAM: INTRAVENOUS DRUG USE TREATMENT, STD, TB, AND HIV/AIDS SCREENING

National statistics show that more than 70 conditions requiring hospitalization (most notably cancer, heart diseases, and HIV/AIDS) have risk factors associated with substance abuse. One out of every five dollars Medicaid spends on hospital care is attributable to substance abuse (U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES, 1997 Fact Sheet). The same report shows that injecting-drug use is the primary mode of transmission of HIV among women and is responsible for 71 percent of AIDS cases among women. The lifetime cost of taking care of one AIDS patient is approximately $85,000. The U.S. SUBSTANCE ABUSE AND MENTAL HEALTH SERVICES ADMINISTRATION estimates that over five million persons in the United States were in need of treatment for severe drug abuse problems in 1998. Almost 60 percent of these people, or an estimated 2.9 million, have not received treatment for their addiction. The size of this treatment gap has remained relatively unchanged over the past eight years, ranging from 54 percent to 68 percent.[1]

[1] CSAT by Fax, August 30, 2000, Vol. 5, Issue 13.

As part of the Louisiana's State Demand Need Assessment Studies, the DHH OFFICE FOR ADDICTIVE DISORDERS (OAD) collaborated with the Research Triangle Institute in North Carolina and Louisiana State University (LSU) Medical Center in New Orleans to publish an Integrated Population Estimates of Substance Abuse Treatment Needs Study in August 1999. This work was supported by the CENTER FOR SUBSTANCE ABUSE TREATMENT (CSAT). The study showed that 10.2 percent of Louisiana adults, or 318,857 persons, were found to be in need of substance abuse treatment. The DHH/OPH region with the greatest number of persons needing services was Region 1 (Orleans, Jefferson, Plaquemines, and St. Bernard parishes), while the region with the fewest number of individuals needing treatment was Region 6 (Avoyelles, Catahoula, Concordia, Grant, LaSalle, Rapides, Winn, and Vernon parishes).

Epidemiology

The Community Epidemiology Work Group (CEWG) is a national network of epidemiologists and researchers who meet twice a year to discuss current and emerging substance abuse problems.

A report by the Governor's Office of Crime Control & Prevention[2] highlighting proceedings from the 48th CEWG meeting held in Baltimore, Maryland in June 2000 shows the following trends:

Alcohol, cocaine/crack and marijuana abuse continue to be the most serious substance abuse problems in Louisiana. There are, however, indicators of other drug problems emerging and spreading in areas throughout the state.

The abuse of heroin has been increasing in some parishes and there is concern that this problem could easily spread to other areas. Increased use of "other opiates" include prescription drugs such Dilaudid, Vicodin, Percodan, Darvon, and OxyContin.

There is growing evidence that methamphetamine production and abuse are increasing in Louisiana. An increase in methamphetamine production and distribution was reported in different areas of the state, including East Baton Rouge and Rapides parishes and areas in Region 5.

Alcohol

Indicators continue to be higher for alcohol abuse than for any other substance. In 2001 and 2002, more people in Louisiana entered treatment for primary alcohol abuse then for any other substance problem. Marijuana is widely available, and abuse of this drug is prevalent throughout the State. Cocaine/crack indicators continue at very high level throughout the state as well.

[2] CESAR. September 4, 2000, Vol. 9, Issue 35.

The numbers of persons entering treatment for primary alcohol abuse were highest in East Baton Rouge Parish (1,839), the five parishes in Region 5 (700), Caddo Parish (577), Ouachita Parish (398), and Terrebonne Parish (293). In 2001 in Terrebonne Parish, alcohol was the only substance present in 16 out of 31 drug-related deaths, and alcohol accounted for 45.6 percent of all alcohol/drug-related emergency room (ER) admissions. Driving while intoxicated (DWI) remains a serious problem in most regions of Louisiana. In 2001, 953 people in East Baton Rouge were prosecuted for DWI charges—the highest rate of DWI arrests/citations in the state. While DWI arrests declined in Lafayette and Rapides parishes in 2001, the total number of DWI arrests in those parishes remained high, at 681 and 327, respectively.

Club Drug indicators are relatively low but seizures reflect increased availability and use. While use of club drugs, including methylenedioxymethamphetamine (MDMA or ecstasy) and gamma hydroxybutyrate (GHB), remains low, their use is alarming because users tend to be younger and use may be spreading. According to the Drug Enforcement Administration (DEA), club and designer drugs are available in New Orleans, with MDMA being the most widely used, especially among teenagers and young adults. Seizures caused by ketamine, GHB and its precursor gamma butyrolactone (GBL), lysergic acid diethylamide (LSD), and flunitrazepam (Rohypnol) show an increase in the use and abuse of these substances in New Orleans. According to East Baton Rouge Parish officials, the frequency of rave activities is increasing. Law enforcement agents there seized substantial quantities of MDMA and GHB. In Jefferson Parish in 2001, the monetary value of seized ecstasy was second only to the value of seized cocaine.

Marijuana is widely available, and abuse of this drug is prevalent throughout the state. A survey conducted in 2001 showed that 44 percent of 12th grade students in Bossier and Caddo parishes (Region 7) had used marijuana during their lifetime as compared to the statewide average of 43 percent. Relatively high percentages of clients entering treatment in all parishes reported marijuana as their primary drug of abuse. The numbers of primary marijuana admissions were highest in Orleans (834), East Baton Rouge (649), Terrebonne (315), Ouachita (303), and Caddo (228) parishes. Law enforcement data also reflected the prevalence of marijuana use in Louisiana, with marijuana possession accounting for a majority of drug-related arrests in Lafayette, Orleans, Rapides, and Terrebonne parishes and the parishes in Region 9. In many of the parishes, individuals arrested for marijuana violations are commonly referred to treatment. In Terrebonne Parish, for example, juveniles arrested for marijuana possession are frequently referred to the Terrebonne Addictive Disorders Clinic; this is reflected in the demographics of the treatment population. In 2001, 55 percent of 335 primary marijuana admissions were younger than 20.

Methamphetamine

There is growing evidence that methamphetamine production and abuse are increasing in Louisiana. An increase in methamphetamine production and distribution was reported in different areas of the state, including East Baton Rouge and Rapides parishes and areas in Region 5.

Cocaine/Crack indicators continue at very high levels throughout the state. In 2001, East Baton Rouge (1,893), Orleans (963), and Caddo (604) parishes reported admitting more primary cocaine/crack abusers into treatment than primary alcohol abusers. The wide-ranging effects of cocaine/crack abuse are apparent in law enforcement data. Cocaine/crack-related arrests accounted for the majority of drug-related arrests (Ouachita 41 percent and East Baton Rouge 59 percent).

Other Opiates

The abuse of opiates other than heroin has been increasing in some parishes, and there is concern that this problem could easily spread to other areas. Increased use of "other opiates" included prescription drugs such as Dilaudid, Vicodin, Percodan, Darvon, and OxyContin. In 2001, 156 people were admitted to treatment for "other opiate" abuse in Region 5, up from 85 in 2000. This compares to only 22 admissions in this region for heroin abuse. In East Baton Rouge Parish, there were 140 treatment admissions for "other opiates" in 2002, double the number in 2000. Eighty people entering treatment in Orleans Parish in 2002 reported "other opiates" as their primary drugs of abuse, up from 54 in 2001 and 34 in 2000. In Region 9, opiates or synthetic opioids accounted for 9.3 percent of primary admissions, an increase related in part to OxyContin usage. Although indicators for opiate use in Rapides Parish are limited, drug court staff reported oxycodone use to be on the rise. "Other opiates" were also frequently reported as secondary and tertiary drugs among new treatment admissions in some parishes.

Key findings issued by the Louisiana State Epidemiology Work Group (LAEWG) in its September 2002 Report show an increase in admissions by primary drug abuse across the ten OAD administrative regions for alcohol, cocaine/crack, marijuana, methamphetamine, other opiates, and club drugs.

The State of Louisiana Communities that Care youth survey: Student Use of Alcohol, Cigarettes, Marijuana and Inhalants

According to a Communities that Care (CTC) youth survey of 6th, 8th, 10th, and 12th grade students published in 2002, the substances that are the most commonly used by Louisiana's students - alcohol, tobacco, marijuana, and inhalants - were used at levels that were similar to current national levels.

Alcohol is the most commonly used substance by Louisiana students. Prior to the survey, 29.4 percent of students had used alcohol, and 53.6 percent of students have used alcohol at least once in their lifetime. A greater percentage of students reported having used alcohol at least once in their lifetime.

The survey reports that 27.0 percent of 6th graders, 53.1 percent of 8th graders, 69.6 percent of 10th graders, and 77.2 percent of 12th graders have tried alcohol in their lifetime. When comparing the 2001 data to the 2002 data, it can be seen that students' 30-day and lifetime usage of alcohol has decreased in each grade surveyed. For 30-day use, 6th grade use decreased from 16.0 percent in 2001 to 10.8 percent in 2002, 8th grade use decreased from 32.9 percent in 2001 to 27.5 percent in 2002, 10th grade use decreased from 45.4 percent in 1998 to 40.0 percent in 2001, and 12th grade use decreased from 54.5 percent in 2001 to 49.4 percent in 2002. While Louisiana 8th grade students used alcohol during the last 30 days at 7.7 percent higher rate than the national sample, state 10th graders used alcohol 4.6 percent more than the national sample, and state 12th graders used alcohol 0.8 percent more than the national sample. In looking at the lifetime results, Louisiana 8th and 10th graders have higher lifetime alcohol use than national 8th and 10th graders, while 12th graders show a lower rate of usage to the national sample (77.2 percent compared to 78.4 percent).

Tobacco (Smokeless and Cigarettes)

Prior to the survey, 6.6 percent of Louisiana students had used *smokeless* tobacco, and 20.4 percent students have used smokeless tobacco at least once in their lifetime. Smokeless tobacco use decreased in all Louisiana grade levels since the 2001 survey. For lifetime use, 8.6 percent of 6th graders have tried smokeless tobacco at least once in their lifetime. The 2002 survey also reports that 15.5 percent of 8th graders, 19.4 percent of 10th graders, and 22.1 percent of 12th graders have tried smokeless tobacco before. While usage in 1998, 2001, and 2002 is relatively low, 30-day usage levels have decreased approximately 0.4 percent to 1.5 percent in each grade since the 2001survey. Comparisons between the 2002 Louisiana and national surveys showed comparable results (differences of only 2.5 percent to 3.4 percent).

Prior to the survey, 15.2 percent of Louisiana students had used cigarettes, and 39.5 percent have used cigarettes at least once in their lifetime. By the time Louisiana students graduate from high school, a majority (56.5 percent) of them have tried cigarettes at least once in their lifetime. In the 2002 survey 19.2 percent of 6th graders, 40.4 percent of 8th graders, 50.6 percent of 10th graders, and 56.5 percent of 12th graders reported having used cigarettes at least once. Total 30-day usage has decreased 3.7 percent since the 2001 survey, while lifetime use decreased 7.5 percent. Despite these very positive decreases, cigarette use by students in 8th and 10th grade is still higher than in the national survey. Louisiana and national 30-day smoking rates are similar in the 12th grade, with the national rate being slightly higher, while use in lower grade levels is higher in the Louisiana sample. For example, while 14.6 percent of Louisiana 8th graders indicated past-month cigarette use in 2002, 10.7 percent of the national sample reported use. In regards to lifetime use of cigarettes, 40.4 percent of Louisiana 8th graders have reported such, as compared to 31.4 percent of 8th graders nationwide.

Marijuana

As with cigarette use, the 2002 survey shows that the most significant increase in marijuana use occurs when students move into the 8th grade. According to the 2002 survey, 3.5 percent of 6th graders, 15.1 percent of 8th graders, 27.8 percent of 10th graders, and 37.9 percent of 12th graders have tried marijuana at least once in their lifetime. The percentage of students using marijuana in the past 30 days has decreased anywhere from 1.5 percent to 3.6 percent for each grade level. Lifetime usage has decreased 2.3 percent to 4.9 percent for each grade level. Louisiana usage rates in all grades are lower than national rates. Rates of 30-day usage are 1.9 percent lower for 8th graders, 5.7 percent lower for 10th graders, and 6.0 percent lower for 12th graders than for the national sample.

Intravenous Drug Users Treatment

DHH-OAD policy gives intravenous drug users (IDUs) statewide priority admission status to programs (contract and state) and treatment modalities. Block grant requirements mandate that IDUs be admitted to treatment programs within 14 days after request for admission. Interim services are provided within 48 hours if comprehensive care cannot be made available upon initial contact, with a waiting period of no longer than 120 days. OAD offers outreach services statewide using the Indigenous or Behavioral Model, or other models. Activities include education, prevention, condom distribution, clean needle demonstrations, medical evaluations, and referrals.

STD, TB, and HIV/AIDS Screening

In addition to the treatment of problems of addiction, OAD makes testing available for STDs, TB, and HIV to each individual receiving treatment. Testing is offered, either directly or through arrangements with other public or nonprofit private entities, through a Qualified Service Organization Agreement (QSOA) and a Memorandum of Understanding (MOU) between OPH and OAD. This system includes the provision of the necessary supplies by OPH's STD CONTROL, TB CONTROL, and HIV/AIDS PROGRAMS for onsite STD, TB, and HIV testing of OAD clients. Early intervention services include screening, testing and pre- and post-test counseling.

Individuals testing positive for HIV are referred to the DHH-OPH clinics for further evaluation and appropriate testing. Once a client is identified as an HIV patient in the DHH-OPH system, he or she is referred to the local consortium and/or directly to a charity hospital outpatient clinic, under the auspices of DHH-OPH. Besides referrals to public agencies, clients can be referred to other HIV supportive services that are available in the community. OAD utilizes this referral network to access additional services for substance abuse clients diagnosed with HIV/AIDS. The Office has established a working relationship with the referral entities and is able to monitor the needs of clients who have been referred. OAD also provides ongoing counseling to its clients regarding HIV prevention and treatment, self-help groups, and information and referral services.

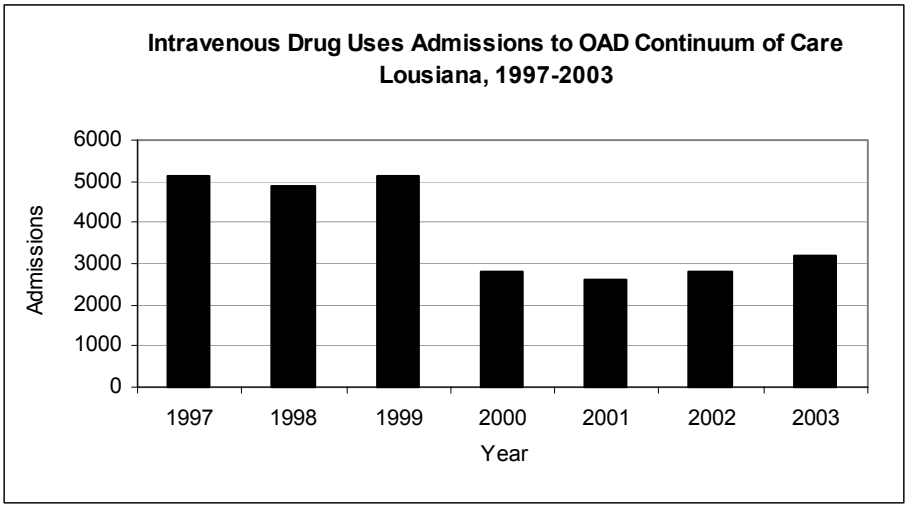
OAD participates in the Statewide HIV Community Planning Group (SCPG) and two subcommittees, Nominations and Special Needs, at the regional level. The goal of the statewide group is to identify interventions that will assist in preventing future infections with HIV and STD among Louisiana's residents. Groups targeted for intervention are racial and ethnic minority groups, sexually active females, men who have sex with men (MSMs), youth, and substance abusers. Currently, interventions utilized are street outreach, counseling and testing, and condom availability.

The SCPG composition is representative of each region and individuals with expertise in education, substance abuse, health, and public health; special at-risk populations (e.g., youth, persons who are HIV infected, AIDS patients, Latinos, Blacks, Native Americans, women, individuals with a varied sexual lifestyle); and representatives from the DEPARTMENT OF PUBLIC SAFETY AND CORRECTIONS, the DEPARTMENT OF EDUCATION, and DHH'S OAD. The regional CPG meets monthly and the statewide committee meets quarterly. Accomplishments for last year included the establishment of a 3-year state plan that was submitted and approved by the CDC, the hosting of two well-attended STD/HIV Annual Conferences, and the achievement of parity in the composition of the committee.

1999-2003 Program Statistics

Intravenous Drug Users (IDUs)

OAD'S Management Information System (MIS) program reports that there were 3,211 IDU admissions to the OAD continuum of care for state fiscal year (SFY) 2003 (11 percent of total admissions); 2,826 IDU admissions to the OAD continuum of care for SFY 2002 (9 percent of total admissions); 2,608 admissions during SFY 2001 (9 percent of the total admissions), 2,830 during the year 2000 (9 percent of the total admissions) 5,147 during 1999 (17 percent of the total admissions), 4,865 during 1998 (18 percent of the total admissions) and 5,142 admissions during SFY 1997 (20 percent of the total admissions).



Source: Louisiana Department of Health and Hospitals. Office for Addictive Disorders

HIV/AIDS

An Executive Summary from the Louisiana HIV/AIDS 2002 Annual Report indicates that at the end of 2002, 14,647 persons in Louisiana were known to be living with HIV/AIDS, of which 6,945 (47 percent) have been diagnosed with AIDS. The report highlights that there are persons living with HIV in every parish in Louisiana, and this number continues to increase each year. According to the report, the higher life expectancy rate according to the report is due to more effective drug therapies.

According to the Office of Public Health (OPH) information published in the most recent CDC HIV/AIDS Surveillance Report (Vol. 14), Louisiana ranked 5th highest in state AIDS case rates and 10th in the number of AIDS cases reported in 2002. Also in 2002, new cases of HIV/AIDS were detected in 62 of Louisiana's 64 parishes. The highest rates of newly-detected HIV/AIDS cases were in Iberville, Orleans, Catahoula, and East Baton Rouge parishes. Additionally, the New Orleans region had the highest number of HIV/AIDS cases detected in 2002, and 44 percent of all persons living with HIV in Louisiana live in this area. However, in 2002, as in past years, the Baton Rouge region surpassed the New Orleans region in the rate of new HIV/AIDS cases. The metropolitan Baton Rouge area ranked 7th and the metropolitan New Orleans area ranked 19th in AIDS case rates in 2001 among the large cities in the nation (CDC HIV/AIDS Surveillance Report, Vol. 13, No. 2).

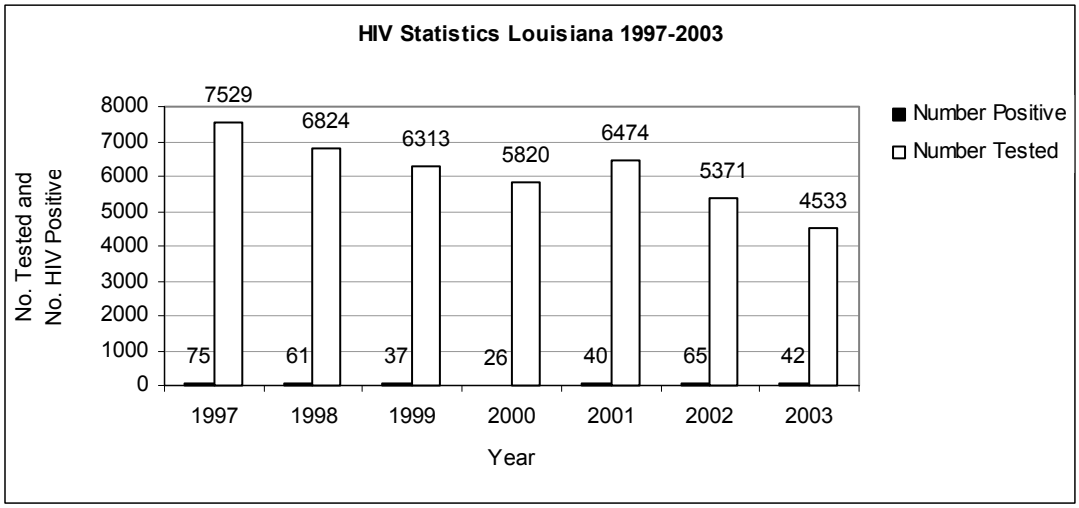
The following statistics represent the regions currently under OAD jurisdiction (Regions 3 through 9). In SFY 1999, Louisiana had an incidence rate of 18 HIV cases per 100,000 population. The most recent incidence rate figure available from OPH is for the year 2002 *Louisiana HIV/AIDS Cases and Case Rates by Parish*, which shows an increase in the detected rate of cases from 18 in 1999 to 27 in SFY 2002[3]. As a result, the state continues to be eligible for block grant expenditures for HIV services (minimum of 5 percent of the total award). DHH-OPH's summary of statistics for calendar year 2003 showed that 4,533 tests were conducted at OAD sites; of these, 42 yielded a positive result (less than 1 percent). During calendar year 2003, OAD conducted 6,127 Pretest counseling sessions, 2,886 Post Test counseling sessions, and 4,795 services.

In calendar year 2003, OPH statistics showed that 4,533 HIV tests were conducted at OAD sites; of these, 42.1 percent tested positive. Historically, in calendar 2002 OPH statistics showed that 5,371 HIV tests were conducted at OAD sites; of these, 65 (less than1 percent) tested positive. Calendar year 2001 showed 6,474 HIV tests with 40 (less than 1 percent) positive results. Calendar year 2000 reports showed that 5,820 HIV tests were conducted at OAD sites; of this tested population, 26 (less than 1 percent) tested positive. Also in calendar year 2000, OAD sites performed approximately 9.8 percent of the total HIV testing done in the state. During calendar year 1999, 6,313 tests were performed, with 37 (less than

[3] Louisiana HIV/AIDS Annual Report – 2002, Geographic Distribution of HIV/AIDS, pg. 14

1 percent) of those tests having a positive result. In calendar year 1998, 61 of 6,824 tests performed were positive (less than 1 percent), while, in 1997, 79 of 7529 tests performed were positive (less than 1 percent). There have been no significant changes in positive results trends since 1992.

OAD provided 5,191 services to HIV infected clients during SFY 2000, 5,045 services for SFY 2001, 4,765 services for SFY 2002, 4,745 services for SFY 2003



Source: Louisiana Department of Health and Hospitals, Office of Addictive Disorders

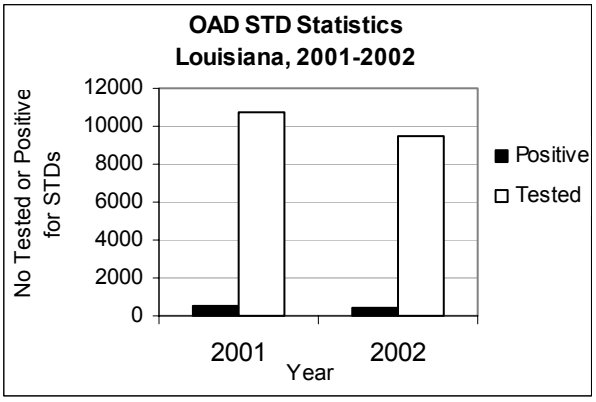
Tuberculosis

For SFY 2003, OAD tested 8,406 clients for TB, according to OAD Set-Aside quarterly reports. OPH did not have the information for calendar year 2003 available at the time of this report. OAD provided 19,842 services for this population during 2003. For SFY 2002, OAD tested 11,305 clients for TB, of which 591 test results were positive (5.2 percent); 25,910 services were provided to this population in 2002. During SFY 2001, 10,438 clients were tested and 740 (7.1 percent) had positive results.[4] OAD reports 9,117 services provided to TB infected clients during SFY 2000, 9,484 services for SFY 2001, and 9,925 services for SFY 2002.

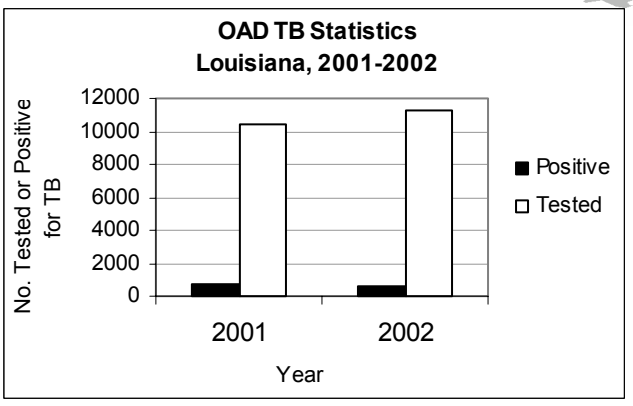
STDs

For SFY 2002, there were 9,509 STD tests conducted, of which 381 (4 percent) were positive.[4] During the 2001 SFY, 10,784 OAD clients were tested for STDs; 570 (5 percent) were found to be positive.[4] In SFY 2000, a total of 5,442 services were provided to STD infected clients; 5,044 services were provided in SFY 2001; and 5,722 services were provided in SFY 2002.

[4] OAD Set Aside Quarterly Reports



Source: Louisiana Department of Health and Hospitals, Office of Addictive Disorders



Source: Louisiana Department of Health and Hospitals, Office of Addictive Disorders

F. Statewide Child Death Review Panel

The State Child Death Review Panel conducts oversight meetings with investigative agencies on unexpected deaths involving children under 15 years old. Additionally, cases of Sudden Infant Death Syndrome (SIDS) are also reviewed. The State Child Death Review Panel, a multi-disciplinary group of professionals, identified a total of 209 unexpected, largely injury-related child deaths in 2001. The State Panel is presently supporting the development of local Panels within a parish or a group of parishes. The development of these "local" Panels will allow agencies directly involved in the investigation of the death to collaborate on strategies for preventing child deaths under similar circumstances in the future.

Reports

Each year, the Panel submits a mandated Report to the Legislature when the latter is in session. Beginning in 2000, the Panel added a new section to the Report which focuses on All-Terrain and Off-Road Vehicle Deaths. Although the number of deaths related to these types of vehicles was less than 10 in both 2000 and 2001, the Panel did identify an increase in the total number from one year to the next. The Panel will continue to educate the public on the circumstances surrounding these deaths in an effort to decrease the number of all child deaths in the future.

The leading causes of child injury death in 2001 were: Motor Vehicle Crashes (63 cases, an increase of three cases from 2000), Fire and Burn deaths (36 cases, an increase of six cases from 2000) and Airway Obstruction/Suffocation Deaths (30 cases, a decrease of only one case from 2000).

G. Dog Bite Injuries

About 2 percent of the population of Louisiana sustains dog bites annually. Few result in fatalities; however, in recent years, there have been fatalities as well as serious disfigurement from dog attacks. Children experience most of the dog bites, and the bites are from dogs that they know, rather than unknown dogs. Children experience dog bites in ways different from adults, and a dog bite can be more traumatic for a child. There is the breakdown in trust, as well as the fear related to the child's relative size and strength compared to the dog. There is also the trauma of treatment, if any is needed. Dog bites can be very serious and are common, preventable injuries.

The EMS/Injury Research and Prevention Program performed a special study of the incidence and characteristics of dog bites in an urban setting. Cooperating hospital emergency room personnel provided information on dog-bite-related visits over a specified time period. The local Society for the Prevention of Cruelty to Animals (SPCA) contributed information from their data on reports of dog bites.

Reports

A report on the outcome of this surveillance project, accompanied by information on avoiding dog bites, is available from the EMS/Injury Research and Prevention Program (http://oph.dhh.state.la.us/injuryprevention/index.html).

H. Personal Flotation Devices

The combination of natural bodies of water, swimming pools, and drainage canals in Louisiana leads to higher-than-average numbers of injuries and deaths from drowning. Staff from the Injury Research and Prevention Program performed an observational survey of boaters in conjunction with the Department of Wildlife and Fisheries.[5] The results of the survey showed that only a small percentage of boaters used personal flotation devices such as life jackets, which are known to save lives. As an adjunct to featuring the outdoor opportunities for visitors to the state, advertising visuals should include safety equipment in use. Other opportunities for preventive education exist in visual materials used at point-of-sale in sporting goods stores and swimming pool related businesses, and in responsible communication and enforcement of safety equipment laws.

Reports

A report on this survey, accompanied by recommendations, is available from the EMS/Injury Research and Prevention Program (http://oph.dhh.state.la.us/injuryprevention/index.html).

[5] MMWR. May 25, 2001 / 50(20); 413-4.

I. Injury Mortality Database

Injury is the leading cause of death among people 1 to 44 years, and the fourth overall cause of death in Louisiana.

In 2002, the most recent year in which injury mortality data are available, 914 residents died as a result of a motor-vehicle crash (rate 20.5 per 100,000). As is the case nationally, males died at a higher rate than females (619 deaths, or 28.6 per 100,000 for males, as compared to 295 deaths or 12.8 per 100,000 for females). Drowning fatalities resulted in a total of 125 deaths (2.8 per 100,000) in 2002. The crude drowning rate in Louisiana continues to exceed the national average. Fire and burn fatalities, the third leading cause of injury-related fatalities, accounted for 105 deaths (2.4 per 100,000)

The Injury Mortality Database, maintained by the Injury Research and Prevention Program, organizes death certificate information on all injury-related deaths in the state. The database is extracted from the DHH-OPH Vital Records electronic death files dating back to 1986. The information is used to examine trends in the occurrence of specific injuries or groups of injuries and to identify and track the injury experiences of different at-risk groups. It provides important data for the planning and evaluation of interventions, public policy development, resource planning, and identification of emerging problems.

Reports

The Injury Research and Prevention Program can generate specific tables, reports, and analyses by cause of death, residency, and a variety of demographic factors upon request for individuals, communities, or agencies. Injury mortality information is also available on the internet through the CDC's Web-based Injury Statistics Query and Reporting System (WISQARS).

J. Burn Injuries

Hospitals are mandated by state law to report severe burn injuries to the Office of the State Fire Marshal in order to assist in the identification of arsonists injured while committing the crime. The Injury Research and Prevention Program has, in the past, partnered with the State Fire Marshal to provide a broader analysis of data that describes patterns of burn injuries in Louisiana. These data can anchor the development of burn injury prevention initiatives, resource planning, and identification of higher risk groups. Extended training for EMS, emergency room, and fire control personnel in areas of higher risk may be based on these findings.

K. LOUISIANA ADOLESCENT HEALTH INITIATIVE

In September 1995, the Louisiana Adolescent Health Initiative (AHI) was launched. AHI facilitates a coordinated, multi-disciplinary approach to adolescent health care, disease prevention, and health promotion in the state. The goal of the initiative is to provide Louisiana adolescents with the opportunity to grow and prosper in a healthy, nurturing, and safe environment. AHI is reaching this goal by increasing coordination and collaboration among internal programs and external agencies, infusing adolescent voices in planning and policy-making efforts of the state, and providing an infrastructure that enables local communities to more effectively and efficiently address adolescent health needs.

The collection of data and dissemination of information is an essential part of AHI. Providing information on adolescent health statistics and on current adolescent health activities is a priority. DHH-OPH serves as a central repository for such information. The use of statewide teen health questionnaires and statewide adolescent focus groups, coupled with the collection of adolescent health statistics, provides parents, communities, politicians, and policy-makers with a clear picture of adolescent health in Louisiana.

Currently, there are many state and local projects that emphasize different aspects of adolescent health. Some focus on teenage pregnancy or teen parenting, while others may focus on HIV/AIDS, tobacco control, conflict resolution, cardiovascular health, or the maintenance of school-based health clinics. AHI allows for the planning, development, implementation, and evaluation of these activities in a coordinated, collaborative manner. In addition, it broadens the scope of cooperation to include the DHH-Office of Mental Health (OMH) and OAD and the Office of Youth Services, among others. Such team-building efforts are necessary to merge the work of all agencies working toward the common goal of ensuring health and well-being of Louisiana's youth.

AHI: Activities to Date:

- Directed the Teen Talk 2000 Focus Group Project to nearly 300 Louisiana youth in all 9 OPH Regions;
- Planned and coordinated the 2000, 2001, and 2002 Safe Summer Violence Prevention Youth Rallies;
- Produced the AHI Website that is updated annually;
- Administered quarterly statewide Adolescent Health Initiative Steering Committee Meetings, bimonthly Body-Wise Nutrition & Obesity Prevention Program Meetings, monthly Louisiana Youth Suicide Prevention Meetings, and monthly Louisiana Young Women's Health Summit Meetings;
- Increased coordination with over 100 internal DHH-OPH programs and external agencies involved in public health, public policy and social welfare;
- Provided technical assistance to local, statewide, and national adolescent health coalitions that are performing comprehensive adolescent activities (Let's Talk Month Activities, National Day to Prevent

Teen Pregnancy, National Month to Prevent Teen Pregnancy, National Week to Prevent Suicide, Yellow Ribbon Youth Suicide Prevention Week, and National Women's Health Week Activities);
- Featured in multiple Louisiana newspapers, TV stations, and national newsletters;
- Formed and chairs the Louisiana Youth Suicide Prevention Task Force, trained 400 multi-disciplinary professionals in all 9 OPH regions, and hosted the 1st Multi-parish Planning Summit to Prevent Suicide;
- Planned and coordinated the 1st Louisiana Young Women's Health Summit (YWHS) held at the New Orleans Superdome, which featured 250 adults and young women in attendance, 28 youth vendor exhibitions; coverage by 10 media outlets, highlighting by the Office on Women's Health as the 1st local YWHS in the nation, attendance by young women, their adult chaperones and various speakers from 4 other states, and which resulted in a Dallas Teen Fashion Show and a Houston Young Women's Health Summit;
- Provided technical assistance and expertise to the CDC/Suicide Prevention Resource Center/Children's Safety Network-Federal Region VI & IV's Suicide Prevention Conference by participating in monthly conference calls, facilitating sessions, organizing Tulane student volunteers, and presenting the Louisiana Strategic Plan to Prevent Youth Suicide.

AHI: Continuing Activities:

- Produces, distributes and annually updates the Louisiana Adolescent Data Book, which includes a statistical compilation of adolescent health indicators;
- Produces, distributes and annually updates the Louisiana Teen Pregnancy Prevention Directory, which includes a listing of statewide programs that provide counseling and medical services to help teens prevent pregnancy;
- Produces and distributes annually the Louisiana Adolescent Health Fact Sheet, which gives an accurate account of the health status of Louisiana adolescents;
- Collaborates with other state and national adolescent projects (National Campaign to Prevent Teen Pregnancy, Advocates for Youth, Louisiana Teen Pregnancy Prevention Task Force, and New Orleans Mayor's Children Service's Collaborative);
- Serves as an Adolescent Specialist on many statewide Adolescent Task Forces;
- Gives AHI presentations at national (e.g., *Healthy People 2010*), statewide, and local conferences;
- Plans and coordinates the Body-Wise Nutrition and Obesity Prevention School Program and the Louisiana Young Women's Health Summit;
- Plans and administers Gatekeeper training sessions in the coming year, which will focus on school professionals such as teachers, nurses, coaches, counselors, social workers, and resource officers. (one Gatekeeper training of 50 school professionals will be conducted in each of the 9 regions of the state, ultimately reaching 450 school professionals);
- Plans and administers Multi-Parish Planning Summits that will be conducted in 5 areas of the state in order to bring together 50 participants per meeting, representing various disciplines from within the

schools and the community (previously trained Gatekeepers will be reconvened and updated on the Louisiana Suicide Prevention Plan).

L. Environmental Epidemiology and Toxicology

The DHH-OPH's Section of Environmental Epidemiology and Toxicology (SEET) promotes reductions in disease morbidity and mortality related to human exposure to chemical contamination. SEET oversees and responds to public health needs across the state with regard to environmental health issues.

In recent years, there has been an increase in public awareness of the acute and chronic health effects of chemicals in the environment and a greater demand for SEET to investigate these effects. SEET attempts to address residents' concerns by:

- Identifying toxic chemicals in the environment that are likely to cause health effects;
- Evaluating the extent of human exposure to these chemicals and the adverse health effects caused by these exposures;
- Making recommendations for the prevention/reduction of exposure to toxic chemicals and the adverse health effects caused by these exposures; and
- Promoting a better public understanding of the health effects of chemicals in the environment and of the ways to prevent exposure.

Activities conducted by SEET include:

Epidemiological and Toxicological Investigations

- Public Health Assessment/Health Studies (PHA/HS) Program

www.oph.dhh.state.la.us/environmentalepidemiology/pubhlthassess

- Pesticide Exposures

www.oph.dhh.state.la.us/environmentalepidemiology/healthrelatepest

- Disease Cluster Investigations

www.oph.dhh.state.la.us/environmentalepidemiology/diseaseclust

- Environmental and Health Effects (EHET) Program
- Population-Based Blood Mercury Services Sub-program
- Chemical Event Exposure Assessment

Environmental Health Advisories (See "Chapter IV: Preventive Health Outreach/Service/Education Programs")

- Mercury in Fish

www.oph.dhh.state.la.us/environmentalepidemiology/healthfish

Environmental Health Education (See "Chapter IV: Preventive Health Outreach")

- Health Effects Related to Pesticide Exposure
- Mercury in Fish
- Health Professional Education Sub-Program
- Private Water Well Brochure

  www.oph.dhh.state.la.us/engineerservice/ssafewater/docs/water_brochure.pdf
- Indoor Air Quality Education

  www.oph.dhh.state.la.us/environmentalepidemiology/indoorair

Environmental Health Emergency Response Programs

- Environmental Public Health Emergency Preparedness and Response (EEPR)

www.oph.dhh.state.la.us/environmentalepidemiology/emergencyresponse

- Chemical Terrorism
- Poison Control Center Notifications Sub-Program
- Geographical Information System (GIS) Program
- Hazardous Substances Emergency Events Surveillance Project

www.oph.dhh.state.la.us/environmentalepidemiology/HSEES

Other projects as described below are representative of those coordinated by SEET.

Public Health Assessment/Health Studies (PHA/HS) Program

www.oph.dhh.state.la.us/environmentalepidemiology/pubhlthassess

Health assessors complete extensive Public Health Assessments or shorter Health Consultations for Superfund and other hazardous waste sites in Louisiana. The Public Health Assessment is an evaluation of all relevant environmental information, health outcome data, and community concerns about hazardous waste sites. It identifies populations potentially at risk and offers recommendations to mitigate exposures. A Health Consultation is a response to a request for information and provides advice on specific public health issues that could arise as a result of human exposure to hazardous materials. Based on the above documents, health studies, environmental remediation, health education, exposure investigation, or further research may be recommended.

As of January 3, 2004, there were 128 confirmed inactive and abandoned hazardous waste sites in Louisiana, and 342 similar potential sites, according to the Louisiana DEPARTMENT OF ENVIRONMENTAL QUALITY (LDEQ). SEET is evaluating the public health impact of six of these sites, and the potential for further involvement and/or work with additional sites is very likely. Details concerning these activities may be obtained from SEET, which also (1) develops fact sheets and other handouts to help inform the local community about health issues around hazardous waste sites, (2) responds to an individual's request for

toxicological and medical information, and (3) makes presentations in public meetings and availability sessions around the state.

Devil's Swamp Lake

SEET has contracted with Southern University and Texas A&M University to perform health education activities for the Devil's Swamp Lake site in Baton Rouge, East Baton Rouge Parish, Louisiana. Health education activities will include survey development, implementation and education in fish, wild game, and gardening consumption issues for those residents near or utilizing the Devil's Swamp Lake or the surrounding area for subsistence or recreation. These activities will take place in the summer of 2004.

Vermiculite

Vermiculite is a porous mineral used as insulation and to hold water in potting soil. The vermiculite ore examined in a SEET study was mined in Libby, Montana from the early 1900's until the mine closed in 1990. The ore distributed mostly for commercial purposes around the United States and abroad and was known to be contaminated with tremolite asbestos. Exposure to asbestos in vermiculite ore may increase the risk of asbestosis (a chronic lung disease that can produce shortness of breath and permanent lung damage), as well as increase the risk of dangerous lung infections, lung cancer, mesothelioma (a rare cancer of the thin membranes that line the chest and abdomen), and other cancers such as those of the larynx and of the gastrointestinal tract.

The United States Environmental Protection Agency (EPA) and Agency for Toxic Substances and Disease Registry (ATSDR) have identified six facilities in Louisiana, which may have received contaminated Libby ore. Three of these facilities are located in Orleans Parish, one in Jefferson Parish, one in Saint John the Baptist Parish, and one in Caddo Parish. SEET visited all of these sites in January 2002 and decided to analyze cancer statistics for four zip codes which contained the sites: Southern Mineralite Company, Orleans Parish (70117); W.R. Grace Company/ Zonolite, Jefferson Parish (70121); Filter Media Company, Saint John the Baptist Parish (70084); and Best Wall Gypsum on Almonaster Boulevard in Orleans Parish (70126). The zip codes 70117, 70121, 70084 all contained exfoliation plants. The Almonaster Boulevard site was not an exfoliation plant but manufactured gypsum lath and plaster products instead, yet it will also be reviewed at the zip code level because residential areas are present within the 70126 zip code, a half mile to the north and one mile to the west.

The health education outreach included a fact sheet that SEET compiled and mailed to the residents of the four zip codes in August and September 2002.

Pesticide Exposures

Health-Related Pesticide Incident Report Program

www.oph.dhh.state.la.us/environmentalepidemiology/healthrelatepest

The Health-Related Pesticide Incident Report (HRPIR) Program is a statewide surveillance program designed to investigate and evaluate adverse health effects related to acute pesticide exposure. In addition to investigating pesticide exposure complaints, SEET maintains a statewide database. Pesticide exposure complaints are obtained from two sources: the Louisiana Department of Agriculture and Forestry (LDAF) and the Louisiana Poison Control Center (LAPCC). Complaints obtained from LDAF are jointly investigated by LDAF and SEET. Investigations involve the collection and review of environmental and health data relevant to the pesticide exposure incident. A written summary of the findings is provided to the complainant.

Poison Control Center Notifications Sub-Program

Since October 2002, SEET has been receiving all pesticide-related calls from the LAPCC. Case reports obtained from the LAPCC are reviewed and entered into the pesticide surveillance database. Only cases reporting pesticide exposure and health effects are included in the database; cases with unclear exposure histories or no reported symptoms are not included. Most LAPCC cases are investigated solely by SEET. Those incidents that occur on the job or in a public place are referred to LDAF for follow-up.

Cases obtained from LDAF and LAPCC are evaluated to determine short-term and long-term health effects related to pesticide exposure. Cases are classified using standardized pesticide exposure criteria developed by the Centers for Disease Control and Prevention (CDC). Classification categories consider the level of certainty of exposure, documentation of health effects, and the plausibility of reported health effects based on the known toxicology of the pesticides.

Louisiana's Registry of Pesticide Hypersensitive Individuals Sub-Program

www.oph.dhh.state.la.us/environmentalepidemiology/regispesthyper

LDAF and SEET established a statewide Registry of Pesticide Hypersensitive Individuals. The registry's purpose is to enable hypersensitive individuals to receive prior notification of pesticide applications in the vicinity of their homes. With prior notification, individuals can take necessary precautions to protect themselves from inadvertent pesticide exposure. There is no charge for inclusion in the registry, although a physician licensed to practice medicine in Louisiana must certify that the registrant is hypersensitive to pesticides.

The registry is updated annually and provided to all licensed applicators and pest control operators (PCOs). Applicators and PCOs are requested to notify registrants prior to making a pesticide application to a property within 100 feet of, or adjacent to, the registrant's property. Notification by applicators and PCOs is voluntary, and there is no penalty for non-compliance.

In 1999, SEET conducted a telephone survey of all registrants to evaluate their satisfaction with the registry. Of the 62 households on the registry, 37 (60 percent) participated in the survey. Results indicate that 62 percent of the surveyed registrants live in a rural area, of which 49 percent live on a farm. Forty-one percent of the households were notified every time there was a pesticide application within 100 feet of their property, 32 percent were sometimes notified, and 27 percent were never notified.

Overall, 62 percent of the surveyed registrants were satisfied with the registry, although 76 percent of the registrants believed that 100 feet was not a protective enough distance. All surveyed registrants stated that they would be willing to pay a small fee in exchange for mandatory notification by applicators.

Disease Cluster Investigations

www.oph.dhh.state.la.us/environmentalepidemiology/diseaseclust

SEET provides Louisiana residents with information on chemicals or other factors (environmental or naturally occurring) that could potentially cause a disease cluster and comparative rates of the disease in question. SEET also works closely with the Louisiana Tumor Registry (LTR) at the Louisiana State University Health Sciences Center in New Orleans to address concerns about a perceived increase in cancer rates throughout the state. During the 2003 calendar year, SEET was notified about or responded to approximately 21 reports of disease clusters throughout the state. In an effort to increase the effectiveness of the program, SEET has drafted Cancer Cluster Investigation Guidelines along with the LTR to address Louisiana residents' concerns.

Public Outreach Sub-Program

SEET provides public outreach services concerning disease clusters throughout the state, such as environmental public health education on cancer.

Environmental and Health Effects Tracking (EHET) Program

On September 15, 2003, Louisiana was one of ten states selected and awarded approximately $1 million by the CDC, over the next 3 years, to fund a pilot project to support the development of a National Environmental Public Health Tracking Network (NEPHT) under the Environmental and Health Effects Tracking (EHET), Program Announcement 03074. The purpose of this program is to demonstrate and evaluate methods for linking data from ongoing, existing public health surveillance systems with data from

existing surveillance systems for human exposure and environmental hazards. The national effort to develop an environmental public health tracking program will ultimately lead to the standardization of how both public health and environmental data are collected and potentially used. With the full support of the CDC and other cooperative agreement states, Louisiana will be one of the nation's leaders in developing and maintaining environmental public health surveillance systems.

LDHH/OPH/SEET's specific pilot project will use wood preservation and treatment sites in Louisiana as a framework to describe trends in groundwater contamination and cancer incidences. The project will also assess methodological issues related to developing indicators for environmental health surveillance and for developing realistic technical standards for data collection and management. LDHH/OPH has established a working group with the LDEQ Office of Environmental Assessment to address the seven objectives of the program, as described in the attachments.

Since being awarded the cooperative agreement, SEET has taken steps towards defining data sources that will be used in this surveillance system, such as groundwater contamination data from LDEQ's files, drinking water data from OPH/Safe Drinking Water Program, cancer data from LTR, as well as other relevant data sources throughout the state. EHET program staff have also initiated an effort to develop a community consortium that will establish collaborative relationships with environmental scientists, legislators, technical experts, and community groups. Some functions of this consortium will be to review and comment on the program work plan, results of the wood preservation project, and technical standards and indicators of environmental hazards or disease; assist in the communication and dissemination of the program findings; facilitate access to data; and to participate in the evaluation component of the project.

Population-Based Blood Mercury Services Sub-Program

In 1998, 313 individuals from selected parishes in Louisiana participated in a blood mercury screening. Ninety-eight percent of the study participants were within an expected range of mercury blood levels. The remaining 2 percent exhibited slightly elevated mercury levels and were advised to decrease fish consumption.

As an outcome of this investigation, a health risk assessment is being conducted in partnership with the Tulane University School of Public Health and Tropical Medicine. This study will assess the exposure status of subsistence fishermen and their families as it relates to blood mercury levels.

The 1998 blood mercury services screening revealed that a small percentage of the participants had a slightly elevated blood mercury level. These individuals were from Ouachita and Morehouse parishes. In 2003, SEET returned to northeast Louisiana to offer additional blood mercury screening for commercial

fishers and their families, as well as others who eat fish caught in local water bodies. Seventy-seven individuals from Morehouse, Union, and Ouachita parishes participated in the screenings. Sixty-eight percent of those participants had a blood mercury level within the expected range, while 25 percent exhibited slightly elevated mercury levels and were advised to decrease fish consumption. The remaining 7 percent were advised to seek a medical evaluation because their blood mercury level was elevated.

Chemical Event Exposure Assessment

SEET responds to requests for information and investigations from the public and government agencies regarding health effects of known and suspected toxic substances in the environment. Some of these inquiries develop into comprehensive health investigations involving interagency workgroups.

M. VITAL STATISTICS

Vital statistics data provide a body of information that serves as the foundation for monitoring the health and well-being of Louisiana residents. These data are collected via birth, death, fetal death, abortion, marriage, and divorce certificates. Collection and processing of vital statistics information is the responsibility of DHH-OPH's VITAL RECORDS REGISTRY.

A large number of health status indicators rely on vital statistics data. These indicators include infant death rates, numbers of low birthweight infants, percentage of mothers lacking adequate prenatal care, teen birth rates, homicide and suicide rates, rates of death from AIDS, and motor-vehicle injury death rates, among many others. Vital statistics data are used in both the public and the private sectors to identify health needs in the population and to target effective health interventions. Vital statistics health status indicators are also used to measure achievement of the CDC'S Healthy People 2010 objectives.

The role of the STATE CENTER FOR HEALTH STATISTICS (CHS) is to analyze vital statistics data and distribute findings to government programs, community organizations, universities, and interested members of the general public. The Center accomplishes this through publication of the annual *Louisiana Vital Statistics Report*, the *Louisiana-Health at a Glance* poster and through response to ad hoc requests for data and information. CHS is also responsible for compiling information from the different DHH programs to create the legislatively mandated annual *Louisiana Health Report Card*.

2002 Statistics

Please refer to "Chapter I: Population and Vital Statistics."

Reports

Reports and data tables published by CHS, including the annual *Louisiana Health Report Card, Louisiana Vital Statistics Report,* and the *Louisiana-Health at a Glance poster*, may be viewed and downloaded by the public at the Center's internet website (please refer to "Contact Information" at the end of this publication). CHS also maintains databases of births, deaths, fetal deaths, abortions, marriages, and divorces, which it uses to respond to data requests from communities, agencies, and the general public through generation of ad hoc reports and analyses.

N. STATE HEALTH CARE DATA CLEARINGHOUSE

Act 622 of the 1997 Regular Legislative Session (Louisiana Revised Statutes 40:1300.111-1300.113) defined the STATE HEALTH CARE DATA CLEARINGHOUSE as the entity responsible for the collection of health care and health industry-related data. The Act charges the CLEARINGHOUSE with responsibility for creating population-based health care data registries that will offer Louisiana and its health care providers their first opportunity to plan and operate systematic intervention strategies that address morbidity.

In prioritizing the mandates of the HEALTH CARE DATA CLEARINGHOUSE (which is housed within CHS), the OFFICE OF PUBLIC HEALTH considered the various health information data streams already in existence and the data collection experiences of some 36 other states, and determined that Louisiana would benefit most by focusing initial data collection efforts on hospital inpatient discharge data. In addition to the inpatient discharge database, the CLEARINGHOUSE also plans to work with hospitals and other facilities to develop a statewide hospital outpatient emergency room database and other data sets which will provide a more complete picture of the health of Louisiana residents and help address the urgent concerns regarding the increasing threat of bioterrorism.

Louisiana Hospital Inpatient Discharge Database (LAHIDD)

Many areas of Louisiana are experiencing rising health care costs and shortages of health professionals. Consequently, it is essential that patients, health care professionals, hospitals, and third-party payers have the information needed to determine appropriate and efficient use of health services and accurately evaluate needs and usage. This requires an understanding of patterns and trends in the availability, utilization, and costs of health care services, as well as the underlying patterns of disease that necessitate these services.

The Louisiana Hospital Inpatient Discharge Database (LAHIDD) contains inpatient discharge data submitted to DHH-OPH by licensed hospitals in Louisiana dating back to January 1, 1998. As the state's only comprehensive, population-based repository of hospital inpatient data, LAHIDD contains information needed to measure and evaluate illness and cost trends in the state (e.g., information on diagnoses, procedures performed, and the costs of those procedures). Until the creation of this database, this

information could be estimated only for selected illnesses through surveys of subsets of the state's population.

For the most part, the hospital data sent to the registry are a natural by-product of hospital billing activity and are already widely available in a reasonably standard electronic format. In accordance with Act 622 of 1997, there is an increase in the responsibility on the state's medical care providers to collect the data that provides the "patterns and trends in the availability, use, and charges for medical services."

Receipt of the twenty-first quarterly data submissions from hospitals (i.e., discharges occurring from October to December 2003) is in progress. One hundred and ninety-seven licensed hospitals housing 26,281 beds participated in submission of data to the CLEARINGHOUSE in 2001. The data for 2002 (the most recent year for which data are complete) were loaded into the database in April, 2004.

Activities to date

Prior to the fall of 2000, LAHIDD activities focused on creating the organizational infrastructure needed to assure two-way communication and an easy flow of data from hospitals to the STATE HEALTH CARE DATA CLEARINGHOUSE. These activities included:

- providing information to hospitals regarding regulations and submittal procedures;
- receiving scheduled data submissions;
- performing preliminary data error checks; and
- notifying hospitals when excessive numbers of data errors were found in these preliminary checks.

During 2001 and 2002, progress was made in the development of the electronic infrastructure needed to house the database and facilitate access to the data. This progress includes:

1) Collaborating with the DHH-OPH'S MANAGEMENT INFORMATION SYSTEMS (MIS) SECTION to:
- complete the software structure needed to construct the LAHIDD database;
- load the data from January 1998 through December 2000 into the database structure;
- identify software tools needed to (i) improve the speed and accuracy of data loading and (ii) enable de-duplication and logical error checking (both of which are required before data are available for analysis); and
- produce the first *Louisiana Hospital Inpatient Discharge Database (LAHIDD) Report* for the Regular Legislative Session.

2) Collaborating with OPH-MIS (for technical expertise) and the CARDIOVASCULAR HEALTH CORE CAPACITY PROGRAM (for financing) to purchase:
- a hardware platform with the capacity to hold and backup the LAHIDD database and
- a software tool that will enable internet-based data reporting.

3) Developing the following software tools, which were distributed to hospitals in spring 2001:

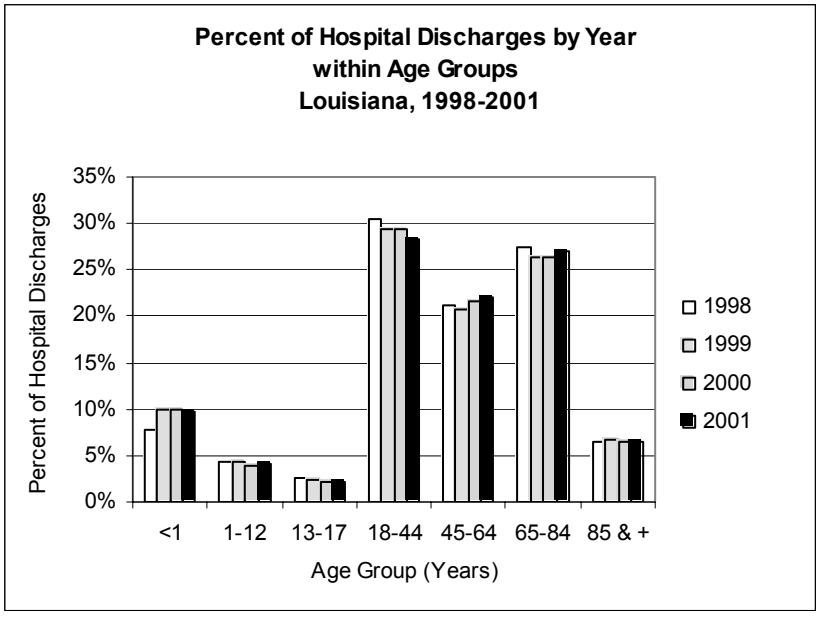
- a data entry tool to be used by hospitals that currently lack the capability to submit data electronically; and
- a data quality assurance tool that will enable hospitals to perform preliminary data error checks before submitting data to LAHIDD.

4) Determining the content and format of hard copy and Internet-based reports to be distributed to submitting hospitals

In 2003, CHS published the first *LAHIDD Report* and distributed copies to the Legislature. The report describes patient trends throughout Louisiana and inpatient care in the state during the period 1998 - 2000 consolidated by patient and disease characteristics, along with cost of hospitalization. For the above reporting as well as 2001, Louisiana patterns of morbidity, and use and charges for inpatient medical services are summarized as follows:

Demographics:

Patients between 18 and 44 years of age accounted for the highest percentage of hospital stays in Louisiana for the period 1998 - 2001. Those aged 65 through 84 followed closely at slightly lower percentages for the four-year period.



Source: Louisiana Department of Health and Hospitals
Louisiana Hospital Inpatient Discharges Database (LAHIDD)

Principal Diagnosis:

The most common diagnosis for hospitalization during the four-year period was "live birth" of an infant. In 1998, 1999 and 2001, "pneumonia" (except that caused by tuberculosis or STDs) ranked second as a principal diagnosis for hospital discharges. In the year 2000, "pneumonia" (except that caused by tuberculosis or STDs) was surpassed by "coronary atherosclerosis and other heart disease" as the second ranking principal diagnosis.

The following four tables summarize the leading diagnosis resulting in hospitalization using the body system classification. "Diseases of the circulatory system", which accounted for approximately 19 percent of all discharges for the period 1998 - 2001, ranked first. "Complications of pregnancy, childbirth and the puerperium" ranked second at approximately 13 percent, while "diseases of the respiratory system" accounted for approximately 10 percent of discharges in the four-year period *(Tables 1a-1d).*

Table 1a. Top 10 Principal Diagnoses, Louisiana, 1998

Rank	Principal diagnosis	Number of discharges	Percent of all discharges
1	Diseases of the circulatory system	89,396	18.95
2	Complications of pregnancy, childbirth, and the puerperium	62,869	13.33
3	Diseases of the respiratory system	50,261	10.66
4	Diseases of the digestive system	41,948	8.89
5	Injury and poisoning	34,739	7.37
6	Diseases of the genitourinary system	27,104	5.75
7	Perinatal conditions	26,030	5.52
8	Mental disorders	25,487	5.40
9	Neoplasms	25,071	5.32
10	Endocrine, nutritional, metabolic and immune diseases	18,366	3.89
	Total Top 10 Discharges	401,271	85.08
	Total Discharges in 1998	471,636	100.00

Table 1b. Top 10 Principal Diagnoses, Louisiana, 1999

Rank	Principal diagnoses	Number of discharges	Percent of all discharges
1	Diseases of the circulatory system	88,196	18.49
2	Complications of pregnancy, childbirth, and the puerperium	62,462	13.10
3	Diseases of the respiratory system	53,100	11.13
4	Diseases of the digestive system	41,192	8.64
5	Perinatal conditions	36,884	7.73
6	Injury and poisoning	31,997	6.71
7	Mental disorders	28,119	5.90
8	Diseases of the genitourinary system	26,421	5.54
9	Neoplasms	22,671	4.75
10	Endocrine, nutritional, metabolic and immune diseases	18,241	3.82
	Total Top 10 Discharges	409,283	85.81
	Total Discharges in 1999	476,956	100.00

Table 1c. Top 10 Principal Diagnoses, Louisiana, 2000

Rank	Principal diagnoses	Number of discharges	Percent of all discharges
1	Diseases of the circulatory system	96,397	19.04
2	Complications of pregnancy, childbirth, and the puerperium	65,576	12.95
3	Diseases of the respiratory system	49,487	9.78
4	Diseases of the digestive system	43,010	8.50
5	Perinatal conditions	39,844	7.87
6	Injury and poisoning	35,171	6.95
7	Mental disorders	29,096	5.75
8	Diseases of the genitourinary system	27,203	5.37
9	Neoplasms	24,156	4.77
10	Endocrine, nutritional, metabolic and immune diseases	19,588	3.87
	Total Top 10 Discharges	429,528	84.85
	Total Discharges in 2000	506,214	100.00

Table 1d. Top 10 Principal Diagnoses, Louisiana, 2001

Rank	Principal diagnoses	Number of discharges	Percent of all discharges
1	Diseases of the circulatory system	106,599	18.98
2	Complications of pregnancy, childbirth, and the puerperium	65,756	11.71
3	Diseases of the respiratory system	53,614	9.55
4	Diseases of the digestive system	47,489	8.45
5	Perinatal conditions	43,383	7.72
6	Injury and poisoning	38,726	6.89
7	Mental disorders	31,985	5.69
8	Diseases of the genitourinary system	29,400	5.23
9	Neoplasms	25,371	4.52
10	Endocrine, nutritional, metabolic and immune diseases	23,830	4.24
	Total Top 10 Discharges	466,153	82.99
	Total Discharges in 2001	561,671	100.00

Note: Shadowed areas indicate rank unchanged for this four-year period. Grouping used in these tables is done by using the first two-digits of the multiple level Clinical Classifications Software codes, called Body System.
Source: Louisiana Hospital Inpatient Discharge Database

Principal diagnoses with the highest charges per stay and the longest average length of stay (LOS):

Follow-up from years 1998 to 2001 reveals a steep increase in charges for treatment in most of the diseases or conditions that required hospitalization. The most notable ones include : “Respiratory Distress Syndrome” from tenth rank in 1998 ($37,267 for average LOS 12 days) to first rank in 2001 ($83,077 for average LOS 20 days); leukemia from fifth rank in 1998 ($39,771 average LOS 13 days) to third rank in 2001 ($62,4992 average LOS 12 days); and short gestation, low birth weight, and fetal growth retardation been ranked first in 1998 ($48,903 average LOS 21 days) and second rank in 2001 ($69,641 average LOS 21 days). For 1998, 2000 and 2001, short gestation, low birth weight, and fetal growth retardation were the conditions with the longest average hospital stay (21 days). In 1999, “Other (central nervous system) infections and poliomyelitis” were the conditions treated in Louisiana hospitals with the longest average hospital stays at 15 days. Four of the top 10 most costly diagnoses also had the longest lengths of stay in 1998 - 2001.

Additional information on the LAHIDD program may be found on the Internet at:
http://www.oph.dhh.state.la.us/recordsstatistics/statistics/statehealth/index.html